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Motivational Effects of Need to Belong on Intergroup Memory in Minimal Groups

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by

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Abstract

Recent research has shown that assigning participants to novel mixed-race groups can eliminate racial bias by shifting identity and affiliation goals to the novel in-group rather than racial group. People make judgments about other people based on the novel in-group rather than the racial group. This research makes the assumption that these results occur because the new group is more motivationally relevant to participants in that moment. Yet, this important assumption has never been directly tested. The current research explores how people prioritize multiple group memberships and what effects these prioritizations have on intergroup bias by exploring a key motivational factor, the need to belong. Research on the need to belong has shown that when a person is ostracized by others, they will be motivated to affiliate more strongly with in-group members. In the study, participants were randomly assigned to write one of three paragraphs about a time they felt included, a time they felt excluded, or a neutral control condition. They were then randomly assigned to one of two teams and learned about faces from both teams. Finally, participants completed a face recognition task. Subjects were undergraduate students at Ohio State who completed the experiment in partial fulfillment of class requirements. We found that participants who were made to feel excluded and then assigned to a novel team showed the greatest affiliation with their new in-group, expressing greater memory for members of their in-group. This project expands Social Identity Theory, Self-Categorization Theory, and Multiple Categorization Theory by showing that a person's need to belong is an important factor in determining how a person will sort their group memberships. People who are ostracized may find it even more necessary than usual to try and fit in with a wider-range of people by re-defining their social identity. This research is important to understanding prejudice and discrimination that can occur in intergroup interactions by explaining how social motivations can change the way a multiply-categorizable person is perceived.

Motivational Effects of Need to Belong on Intergroup Memory in Minimal Groups

People have a multitude of identities, and the importance of any of these identities can shift from one moment to the next. These identities are not always distinct and separate from each other. They may overlap and at times even conflict. For example, a black person must simultaneously hold their African-American identity with their identity as an American in general. In order to ensure social interactions proceed harmoniously, research is needed to understand the mechanisms by which people sort out their complex group memberships. The current research examines the role of motivation in this process.

One of the ways in which people define themselves is in terms of group membership. Tajfel (1982) proposed Social Identity Theory to explain how affiliation with a group can help people define and categorize themselves. People categorize not only themselves, but others as well. Tajfel also proposed that people seek to maintain a positive social identity, by making comparisons and judgments that favor their in-group. One of the most important consequences of using a social identity for self-definition is in-group bias, or a preference for members of one's own group relative to members not in one's own group.

In-group bias is evident in perceptual biases such as the own-race memory bias, in which people remember others of their own race more readily than those of other races (Malpass & Kravitz, 1969), or out-group homogeneity, in which people see less variability among members of other races than they do their own race (Ostrom & Sedikides, 1992). Such perceptual bias can lead to detrimental forms of discrimination. For example, Meissner and Brigham (2001) found that chances of mistaken eyewitness identification were 1.6 times more likely when the witness and suspect were different races than when they were the same race. In a similar vein, Brigham and Ready (1985) found that people were more selective when constructing own-race lineups

than when constructing other-race lineups. These findings suggest that traditional forms of criminal investigation, like suspect line-ups and heavy reliance on eyewitness testimony, are inefficient and problematic, leading to innocent people being accused of serious crimes.

Bernstein, Young, & Hugenberg (2007) have demonstrated that this perceptual in-group memory bias can occur even in minimal, arbitrary groups. Figuring out the processes behind these biases is essential to developing methods of combating them.

Recent experimental methods of eliminating or reducing racial bias have been encouraging. A series of studies found that assigning people to mixed-race minimal groups could eliminate racial prejudice by turning identity and affiliation goals to the minimal in-group rather than racial group (Van Bavel & Cunningham, 2009; Van Bavel, Packer, & Cunningham, 2008). Using a variant of the minimal group paradigm (see Tajfel et al., 1971), the authors randomly assigned participants to arbitrary mixed-race groups. Membership in either group had no implications, no benefits, and no disadvantages. Participants assigned to one of these mixed-race teams showed greater memory for and greater ratings of their in-group members. This bias was equal for Black and White in-group members. Most important, racial bias was not replaced by negative attitudes toward the out-group, only an increase in positive attitudes toward the in-group (see Brewer, 1999).

The previous studies show that the category of race can be made less important by shifting a person's self-categorization. These findings are important because they provide a way of curtailing racial bias. They show that by forcing a person to reformulate their self-categorizations, bias can shift. However, in order for this to be useful in everyday social interactions, we need to understand *why* a person would re-activate the self-categorization process. What events or contexts would cause them to redefine their group affiliation? Van Bavel

and Cunningham (2009) make the assumption that these results occur because the minimal in-group is more motivationally relevant to participants in that moment. Social Identity Theory (Tajfel, 1982) and Self-Categorization Theory (Turner, Oakes, Haslam, & McGarty, 1994), also argue that self-categorization is fluid and context dependent; primary categorizations must be relevant to a person's *current social identity*.. When other social identities are more important, categorizations and evaluations based on race may be reduced or even disappear. Crisp and Hewstone (2007) supported the Social Identity and Self-Categorization perspective by demonstrating that self-categorizations can be manipulated in cases in which people are multiply-categorizable. When overlapping social identities are made salient, in-group bias lessens due to a decrease in intergroup differentiation; that is people stop exaggerating differences between social groups and see more of the similarities. In their study, Crisp and Hewstone (2001) assigned participants to two in-groups A and X. Participants who were assigned to the two-ingroups, AX, showed less discrimination, in the form of point allocation towards the cross-cutting out-group, BX, than to the convergent out-group, BY. The presence of a shared group categorization caused a change in their bias. Furthermore, AX participants saw more similarities between themselves and BX than between themselves and BY. All of these studies suggest that social categorization is motivationally driven. In other words, the current social situation motivates people to re-categorize themselves and shift their in-group identification and bias. Yet, despite this key assumption, motivation has never been directly tested.

Social Motivation

Social identities and self-categorization help serve fundamental social motives. In their model of multiple-categorization processes, Crisp and Hewstone (2007) posit that certain factors,

like emotion, category importance, and social motivation can affect the amount that people will recognize the overlap in their social identities and consequential intergroup perceptions. Some of the social motives that have been studied are distinctiveness and in-group identification.

Henderson-King, Henderson-King, Zhermer, Posokhova, and Chiker (2007) found that when another group was perceived as a threat to the distinctiveness of a group's identity, emphasizing intergroup similarity actually caused an increase in bias. Similarly, the more a person identifies with their in-group the more likely it is that decreasing intergroup differentiation will lead to an increase in intergroup bias (Jetten, Spears, & Manstead, 2001). These studies show that social motivation has an important role in multiple categorization and subsequent effects on intergroup bias. However, more research is needed to explore which social motivations impact self-categorization and how.

Need to belong is one of the most fundamental social motives. In Maslow's (1943) hierarchy, the need to belong is secondary to only physiological needs (like food and air) and security. Like hunger, the need to belong can be satisfied or deficient. Research has shown that satiation or deprivation can lead to differential motivations for affiliating with groups (Baumeister & Leary, 1995). When a person is deprived of belongingness, such as when they are ostracized from a group, they may exhibit pro-social behaviors to increase their chances of inclusion and sate their need state. For example, participants in a study who were excluded showed greater conformity, more positively evaluated others, and tried harder to establish bonds (Williams, 2007). On the other hand, people may also lash out and show increased aggression towards other people to alleviate the negative emotions generated by ostracism. Participants who were excluded gave more negative job evaluations of others and blasted others with higher levels of noise, even if the other person had not participated in the initial exclusion (Twenge,

Baumeister, & Stucke, 2001). These studies show that when people are high in need to belong they are more likely to engage in behaviors and make judgments that will make them feel included or reaffirm their social identity.

On the other hand, people who have their belonging need satiated they will reduce their efforts to form social bonds. Gerwitz and Baer (1958) found that when children had received praise and admiration before completing a task, they did not show the normal increase in performance as a factor of praise and approval during the task. Lacoursier (1980) showed that efforts to maintain a long distance relationship tend to decrease over time, possibly because new relationships reduce the need to maintain the previous bond. Rusbult, Zembrodt, and Gunn (1982) proposed that people are more likely to leave an intimate relationship if the possibility for another intimate relationship is evident. These studies show that when people are low in need to belong they will reduce efforts to form new relationships and bonds because their social identity is already affirmed.

The Current Research

In the current experiment, we examine the effects of need to belong on identification with minimal groups and in-group memory bias. We hypothesize that people who are made to feel ostracized, increasing their need to belong, will show greater in-group memory bias in a minimal group than those who had not. Since their need to belong is deficient they will latch on to the opportunity to join a group and affiliate with them. Conversely, participants who are made to feel included, decreasing their need to belong, will show less in-group memory bias. Since their social identity is already affirmed, they will not have a need to identify strongly with the minimal group. Moreover, we predict that this change in motivation, not change in emotion, will be the cause of this differential bias. Participants in the current experiment were assigned to mixed-

gender (instead of mixed-race) groups to show the robustness of the minimal in-group bias effects.

Methods

We manipulated participants' need to belong by having them report past, personal experiences about being included, excluded, or a neutral, nonsocial experience (Cohen, Aronson, & Steele, 2000). Participants were then randomly assigned to a mixed-gender minimal group. This allowed us to examine whether exclusion would increase in-group memory bias, as well as the interaction with group assignment. We expected that excluded participants would show more in-group bias towards the minimal group than participants who had not been previously excluded. Participants also completed a measure of current emotional state to determine whether memory biases were due to changes in social motivation or emotion.

Participants

Seventy-five White, non-hispanic, non-Latino undergraduate students (47 males, 28 females) at The Ohio State University completed the experiment for partial course credit. Thirteen participants were excluded from analysis for failing to complete the study or giving the same response for every item.

Procedure

Participants were brought into the lab and gave their consent to participate. They were told that they were in two separate studies. They were told the purpose of *study one* was to understand the “re-experience of memories and how the vividness of this re-experience affects current emotional functioning.” Participants then wrote an essay, either about exclusion, inclusion, or a neutral experience. They then completed a series of follow-up questions. They were told *study two* was designed to examine the impact of personality factors on how people

learn about social groups. Participants completed a learning task in which they were either assigned to one of two mixed-gender teams (Moons or Suns). Participants then completed a measure of their emotions before completing a recognition memory task. During the memory task, participants saw the faces from the two mixed-gender teams along with previously unseen male and female faces and hit a button after each face to indicate whether they had seen the face during the learning task or not. Finally, participants completed a measure of their identification with their mixed-gender minimal group. To reduce any potential negative effects of the exclusion essay, participants wrote a short essay to self-affirm an important personal value. Participants were debriefed about the purpose of the study and the need for deception. They were reassured that their answers would be completely confidential. They were debriefed about the purpose of the study and the need for deception. They were reassured that their answers would be kept completely confidential.

Materials

Need to Belong. Participants wrote one of three essays about a personal experience and how the experience made them feel. They were told the study was about how people experience memories and how the vividness of this re-experience affects current emotional functioning. In the “exclusion” condition, participants were asked to write about a time they felt excluded from an important group. This was expected to make participants higher in need to belong. In the “inclusion” condition, participants were asked to write about a time they felt especially included in an important group. This was expected to make participants lower in need to belong. In the “control” condition, participants wrote about what they ate and drank the previous day, a neutral, non-social experience (Cohen, Aronson, & Steele, 2000). This was expected to have no effect on participants’ need to belong. A series of follow-up questions served as a manipulation check to

see if participants really felt the effects of exclusion or inclusion and also to enhance the realism of the cover story.

Learning Task. Participants were told that they were a member of one of two teams, the Moons and the Suns. Participants were then told to learn the faces of members of the two teams. Each group consisted of 6 white faces each: 3 male and 3 female (for a total of 12 faces). Each face was presented one at a time on the screen for four seconds with a label indicating whether the person was a member of the Moons or Suns. Faces were randomly assigned to teams and fully counterbalanced.

Emotion. Immediately following the learning task, participants completed the Positive and Negative Affect Scale (PANAS-X) to measure their emotional state (Watson, Clark, & Tellegen, 1988). Sixty emotion words were presented on the screen one at a time. Participants were asked to rate each word on a 6-point Likert scale (1 = very slightly or not at all to 5 = extremely) to indicate how much they felt that emotion at the current moment. Words were presented in random order.

Memory Task. Participants then completed a recognition memory task. Each face from the learning task and 12 new white faces (6 male and 6 female) were presented on the screen one at a time (see Fig. 1). Participants were asked to indicate if they had seen the face in the learning task. Faces were presented in random order.

Group Identification. To measure the extent to which individuals identified with the groups they were assigned to, participants answered a series of questions during the debriefing. As a manipulation check, participants were asked if they had in fact been assigned to a team and then answered three questions related to how they felt about that team. They were asked to indicate on a 6-point liking scale (1=strongly disagree to 6 = strongly agree) how much they

agreed with the statements, “I value being a member of the SUNS/MOONS,” “I am proud to be a member of the SUNS/MOONS,” and “Belonging to a member of the SUNS/MOONS is an important part of my identity.” Participants answered these same three questions for both teams. Participants who said they were not assigned to a group did not answer these questions.

Results

We first examined group identification to determine whether participants valued their membership in their minimal group. As predicted, participants identified more with their experimental in-group ($M = 2.5$) than the out-group ($M = 2.0$), although results were not statistically different, $F(1,26^1) = 1.396, p = .258$. In sum, these results suggested that participants did identify slightly more with in-group than out-group members.

The primary focus of the current study was to examine whether exclusion would increase in-group memory bias. We first explored whether participants assigned to a group had superior memory for in-group faces. Replicating previous research (Van Bavel & Cunningham, 2009), participants had better memory for their experimental in-group ($M = .92$) than the out-group ($M = .89$), although the results were not statistically different, $t(138) = 1.193, p = .119$ (one-tailed). We then examined whether in-group memory bias would be exacerbated when participants wrote about exclusion/inclusion. As predicted, a marginal group \times memory \times exclusion interaction indicated that participants showed better recognition memory for their in-group but this effect was largest among participants who wrote about a time they felt excluded, $F(2,274) = 2.56, p = .085$. The difference between memory for in-group and out-group (i.e., in-group memory bias) was greatest for excluded participants ($M = .05$) and smallest for included participants ($M = .012$) relative to the control participants who wrote a neutral essay ($M = .033$) (see Fig. 2). In

¹ Participant data was lost due to a programming error.

sum, these results indicate participants who had been excluded showed the greatest in-group memory bias.

Finally, we examined participants' current emotional state to see if assignment to a group or need to belong had an impact on affect. This allowed us to separate the effects of motivation and affect. There was no change in negative affect when participants were excluded/included, $F(2,138) = .30, p = .74$, or after participants were assigned to a group, $F(1,138) = .06, p = .81$. The interaction exclusion \times assignment to a group was not statistically significant, $F(2,138) = .915, p = .403$. Participants did, however, report an unexpected increase in positive affect as a result of not being assigned to a group ($M = 2.5$) compared to participants who were assigned to a group ($M = 2.2$), $F(2,138) = 5.236, p = .024$, but not as a result of exclusion/inclusion, $F(2,138) = .607, p = .547$. However the critical interaction of the variables (exclusion \times assignment to a group) was not significant, $F(2,138) = .150, p = .861$. In sum, neither need to belong nor assignment to a minimal group affected participants' current emotional state in a meaningful fashion. Instead, there was an unexpected effect of group assignment on positive affect, such that control participants who were not assigned to a group reported more positive affect.

Discussion

This experiment explored the role of the social motivation of need to belong on intergroup perception categorization in minimal groups. Consistent with our predictions, participants with a heightened need to belong showed greater in-group memory bias than participants with a lower need to belong. Specifically, participants who wrote about a time they were excluded from an important social group had greater memory for their minimal in-group than participants who wrote about a time they were included or participants in a control condition. This suggests that need to belong is an important factor in determining the extent to

which people are willing to re-categorize themselves and organizes how they encode the social world. Participants with a heightened need to belong were so desperate to reaffirm a social identity, that they showed greater in-group bias when given the chance to join a group, even a minimal one. Additionally, participants who were lower in need to belong, the inclusion condition, showed the least amount of in-group memory bias, even lower than the control condition, indicating inclusion can reduce the need to affirm one's identity through social categorization.

The current findings also suggest that the effects of need to belong are distinct from the effects of emotion. Participants did not display a significant change in positive or negative emotion as a result of being excluded and assigned to a group. This provides convergent evidence that need to belong, not affect, is the causal factor for the observed differences in intergroup memory.

The current research adds to the growing body of research on social identity in multiple categorization contexts. The findings replicate and extend Van Bavel and Cunningham's (2009) research, showing that mere assignment to a minimal group is enough to elicit in-group bias. Consistent with Social Identity Theory (Tajfel, 1982), participants' social identity was defined by the most salient social category, minimal in-groups, and their biases reflected their current social identification. The current research extended this work by showing that these biases in memory are moderated by motivational state. Participants were motivated by the current social motivations, heightened need to belong, to re-categorize themselves and others into minimal groups.

The current research also extends Crisp and Hewstone's (2007) model of multiple-categorization, by adding the missing link of social motivation. It showed that need to belong

changed the way people perceived others. Consistent with previous findings (Baumeister & Leary, 1995), feelings of ostracism caused participants to change their affiliation goals. Specifically, they were motivated to re-categorize themselves to increase feelings of belonging and reaffirm a social identity. Subsequent perceptions were based on this level of categorization leading to increased memory for their in-group.

Limitations and Future Directions

Need to belong is a complicated motivation; varying degrees on a continuum can lead to very different behaviors. If somebody is made to feel extremely excluded and totally ostracized, they may have very different affiliation goals than participants who are only slightly excluded. For example, they may lash out at everybody instead of trying to be included. In the current study, the need to belong manipulation relied on the ability of participants to recall a past feeling of exclusion. The time distance may have alleviated many of the negative effects of the experience, resulting in less need to belong than would occur immediately following the experience. While this conservative test of the hypothesis produced the predicted effects, a stronger manipulation could increase the power of the effect or produce radically different results. To measure immediate effects of exclusion, a different manipulation is necessary. For example, participants could play Williams and Jarvis's (2006) Cyberball task, in which participants play a virtual game of catch with two people who they think are playing in real-time over the Internet. Halfway through the game, participants stop receiving the ball. Previous use of the paradigm has showed that participants feel extremely dejected and ostracized. The task may increase the power of the current effects. Conversely, since the task creates a high degree of ostracism, participants will be extremely high in need to belong, which might cause them to reverse the pattern of memory bias found in the current study. They may not care about any of

the faces, regardless of whether they are in-group or out-group members. A stronger manipulation of need to belong could reinforce or dramatically change the way people categorize in-group members in a minimal group.

The current research used memory as a measure of in-group bias. However, memory only reflects perceptual bias. While perceptual bias is an important component of intergroup bias, there are other components to consider. Attitudes towards and evaluations of out-group members are one of the biggest sources of discrimination in society and a critical form of intergroup bias. For example, people may select a white job candidate over an equally qualified black job candidate (Dovidio & Gaertner, 2000). A measure of evaluation should be included to see if need to belong has an effect on attitudes in a minimal group situation. From the current results, I would predict that excluded participants would also show exaggerated ratings of in-group members. Increasing ratings of the in-group, increases the value of belonging to that group and reaffirms one's social identity. It is also important that one form of discrimination does not replace another. In other words, in-group ratings should raise, as out-group ratings stay constant, not decrease. I predict that excluded participants will not show out-group derogation because their need will be satiated through membership in the minimal in-group, not through decreasing the value of membership in the out-group. Including a measure of evaluation will enable us to examine if need to belong has an impact on out-group derogation as well as in-group favoritism.

Conclusion

Research on minimal group paradigms is important because it shows one way to combat the seemingly inevitable effects of intergroup bias. Self-categorization is flexible and pervasive biases can be overridden by simply re-categorizing oneself. However, it is important to understand how and why people might be motivated to re-categorize themselves in the real

world. This project explores one of the ways in which multiple-group memberships are affected; it shows that a person's need to belong is an important factor in determining how a person will sort their group memberships. People who are ostracized may find it even more necessary than usual to try and fit in with a wider-range of people by re-defining their social identity.

Understanding the ways people are categorizing and perceiving others has implications for ensuring harmonious interactions in diverse settings. This research suggests methods of manipulating the way people are categorizing themselves and others, effecting subsequent biases. In an increasingly diverse social climate, it is important to understand the implications that social motivation has on how people are perceived and the underlying mechanisms of bias in order to develop ways of combating it.

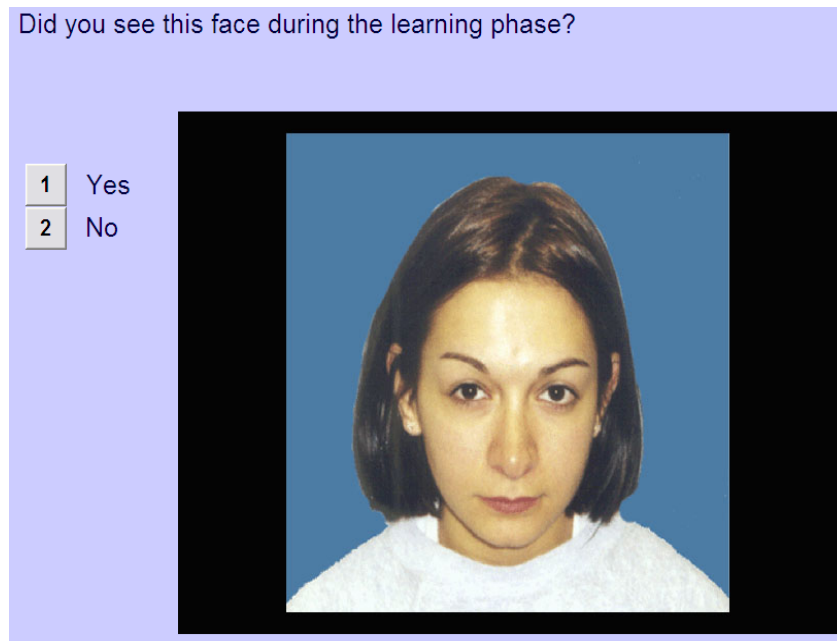


Fig. 1. Face recognition memory task. Participants saw the 12 faces from the learning task and 12 new faces and indicated whether they had seen the face or not during the learning task.

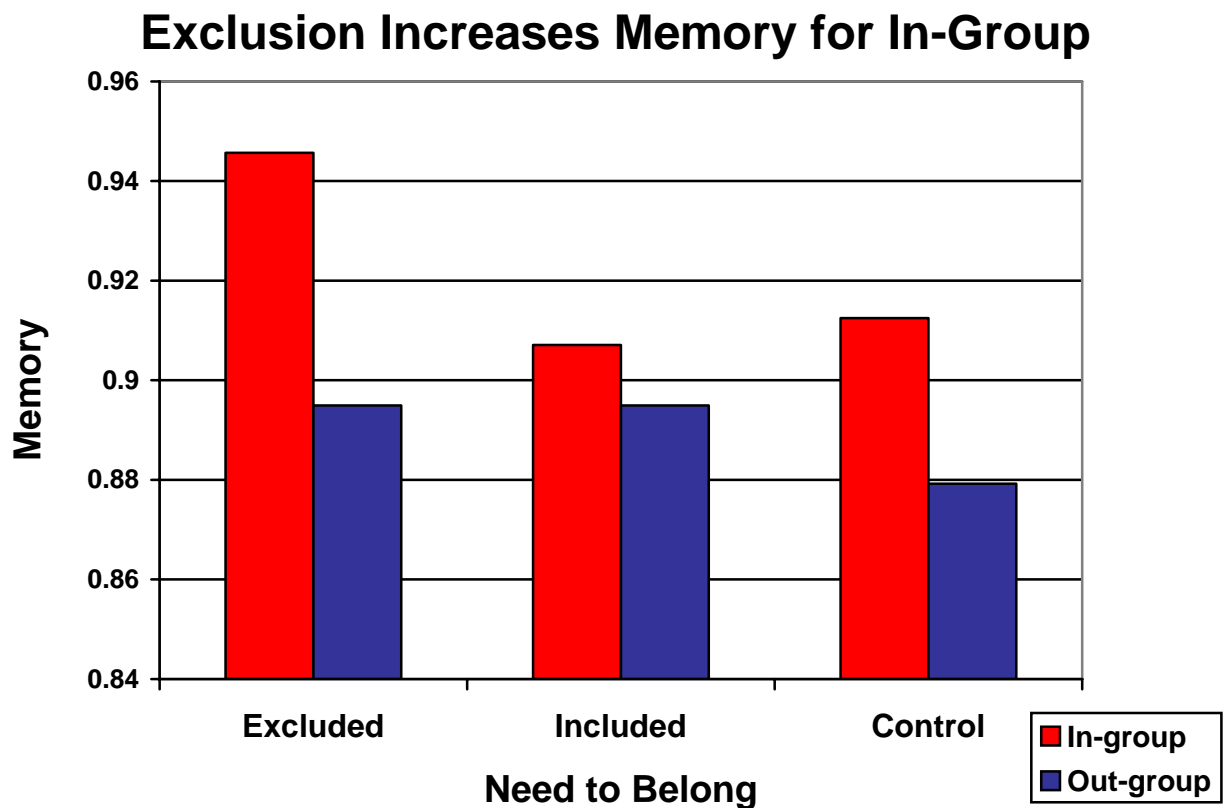


Fig. 2. Mean memory for in-group and out-group faces. Participants indicated whether or not they had seen the face during the learning task such that greater scores indicate greater memory.

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